VOLUME 9 1988

SUBJECT INDEX

Acetylcholine, 617
  automated memory tests
  cognitive impairments
  memory dysfunction
  norepinephrine
Acetylcholine receptors, 305
  neuromuscular junctions
  perijunctional distribution
Acetylcholine release, 357
  age differences
  brain acetylcholine synthesis
Acetylcholinesterase activity, 153
  adenylate cyclase activity
  Alzheimer's disease
  brain tissue, human
  choline acetyltransferase activity
  guanylate cyclase activity
  muscarinic receptors
  VIP-sensitivity
Acute treatment, 287
  age differences
  behavioral deficits
  chronic treatment
  dihydroergocryptine
Adenylate cyclase activity, 153
  acetylcholinesterase activity
  Alzheimer's disease
  brain tissue, human
  choline acetyltransferase activity
  guanylate cyclase activity
  muscarinic receptors
  VIP-sensitivity
Adrenergic receptors, 53
  age differences
  brain neurotransmission
  senescence
β-Adrenergic receptors, 269
  ^{125}I-pindolol binding
  receptor density
Adrenocorticotropin$_{4-9}$, 255
  corticosteroid receptors
  receptor plasticity
Age differences
  acetylcholine release, 357
  acute treatment, 287
  adrenergic receptors, 53
  behavioral deficit, 287
  brain acetylcholine synthesis, 357
  brain binding sites, 281
  brain neurotransmission, 53
  chronic treatment, 287
  classical conditioning, 187
  dihydroergocryptine, 287
  hippocampus, 393
  mossy fiber stimulation, 187
  neuronal plasticity, 393
  opiate receptors, 281
  protein F1, 393
  protein phosphorylation, 393
  rabbits, 187
  sciatic nerve, 275
  senescence, 53
  somatostatin, 275
  substance P, 275
  vagus nerve, 275
Aged neocortex, 199
  cholinergic neurons
  morphologic changes
  neuritic plaques
Age-related changes
  brain redox index, 371
  ergot alkaloids, 371
  glutathione system, 371
  hippocampus, 173
  pyramidal neurons, 173
Age-related deficit, 363
  choline uptake
  hippocampal function
  spatial learning
Aging
  Alzheimer's disease, 31
  blood-brain barrier, 31
  central nervous system, 31
  depressive illness research, 101
  neuroendocrine function, 101
Alzheimer's disease
  acetylcholinesterase activity, 153
  adenylate cyclase activity, 153
  aging, 31
  amnesia, 465
  amyloid peptide, 333
  animal model, 351, 409
  animal model development, 445
  beta amyloid peptide, 333
  blood brain barrier, 31
  blood brain barrier dysfunction, 383
  brain sections, human, 163
  brain tissue, human, 153, 247, 333, 383
  calcium homeostasis, 263
  cell cultures, 195
  central nervous system, 31
  choline acetyltransferase activity, 153
  cholinomimetics, 351
  clonidine, 409
  congophilic angiopathy, 383
  dementia, 465
  DNA sequencing, 333
  dopamine neurons, 247
  fibroblasts, 195, 263
  glial fibrillary acidic protein, 163
  guanylate cyclase activity, 153
  HLA-DR, 339
  human studies, 18, 399
  Huntington's disease, 18
  memory dysfunction, 445
  memory impairment, 465
  memory impairment, age-related, 351, 409
  monkeys, 351, 409
  monoamine oxidase-B activity, 247
  multiple sclerosis, 399
  muscarinic receptors, 153
  natural killer cells, 339
  neurodegeneration, 445
  neuroimmunology, 339
  olfactory function, 399
  Parkinsonian pathology, 247
  Parkinson's disease, 217, 399
  phagocytic cell function, 217
  postmortem RNA, 163
  precursor RNA, 333
  proliferative lifespan, 195
  recombinant cDNA library, 163
  remote memory, 18
  retrograde amnesia, 18
  serum proteins, 383
  T cytotoxic cells, 339
  T helper cells, 339)
  VIP-sensitivity, 153
Alzheimer disease diagnosis, 69
  brain imaging
  heterogeneity
  symptom detection
Alzheimer's type dementia, 609
  forebrain cholinergic system
  memory
Amnesia, 465
  Alzheimer's disease
  dementia
  memory impairment
Amyloid peptide, 333
  Alzheimer's disease
  beta amyloid peptide
  brain tissue, human
  DNA sequencing
  precursor RNA
Animal model
  Alzheimer's disease, 351, 409
  cholinomimetics, 351
  clonidine, 409
  memory impairment, age-related, 351, 409
  monkeys, 351, 409
Animal model development, 445
  Alzheimer's disease
  memory dysfunction
  neurodegeneration
Anorexia, 9
  corticotropin-releasing factor excess
  human studies, elderly
Antioxidants, 743
  calcium
  growth factors
  neurotoxins
  tissue culture
Apparatus
  Morris water maze, 363
  Stone maze, 475, 691
  T-maze, 5
Arecoline, 5
  drug interaction
  memory retention
  tacrine

Associative learning deficits, 523
  eyeblink response
  Pavlovian conditioning
  rabbit studies
Autoimmunity, 733
  avoidance learning
  brain-reactive antibodies
  cognitive decline
Automated memory tests, 617
  acetylcholine
  cognitive impairments
  memory dysfunction
  norepinephrine
Avoidance learning, 733
  autoimmunity
  brain-reactive antibodies
  cognitive decline

Behavioral deficits, 287
  acute treatment
  age differences
  chronic treatment
  dihydroergocryptine
Beta amyloid peptide, 333
  Alzheimer's disease
  amyloid peptide
  brain tissue, human
  DNA sequencing
  precursor RNA
Blood-brain barrier, 31
  aging
  Alzheimer's disease
  central nervous system
Blood-brain barrier dysfunction, 383
  Alzheimer's disease
  brain tissue, human
  congophilic angiopathy
  serum proteins
Brain
  adrenal medulla, 697
  amygdala, 163, 657, 667
  brainstem, 207, 213, 269
  caudate nucleus, 153, 247
  cerebellum, 187, 207, 269, 393, 511, 591
  cortex, 163, 213
  dentate gyrus, 581
  entorhinal cortex, 163, 393
  fimbria-fornix, 475
  forebrain, 371, 667
  frontal cortex, 207, 247, 357, 393
  frontal lobe, 163
  hippocampus, 153, 163, 173, 207, 213, 247, 255, 357, 363, 393, 475, 487, 563, 571, 581, 657
  hypothalamus, 213
  limbic area, 213
  medial septum, 609, 645, 667
  neocortex, 163, 199, 657
  nucleus basalis, 645
  nucleus basalis magnocellularis, 609
  occipital cortex, 207
  parietal cortex, 153, 247
  pons, 187, 247
  putamen, 153, 247
  striatum, 207, 213, 357
  subiculum, 163
  substantia nigra, 163, 247
  suprachiasmatic nucleus, 309
  temporal cortex, 247
  temporal lobe, 153, 163
  thalamus, 153, 247, 269
Brain acetylcholine synthesis, 357
  acetylcholine release
  age differences
Brain binding sites, 281
  age differences
  opiate receptors
Brain imaging, 69
  Alzheimer disease diagnosis
  heterogeneity
  symptom detection
Brain lesions, 667
  drug effects
  forebrain ischemia
  hippocampal cell loss
  memory impairment
Brain, mouse, 207
  choline acetyltransferase activity
  infection, persistent
  lymphocytic choriomeningitis virus
Brain neurotransmission, 53
  adrenergic receptors
  age differences
  senescence
Brain-reactive antibodies, 733
  autoimmunity
  avoidance learning
  cognitive decline
Brain redox index, 371
  age-related changes
  ergot alkaloids
  glutathione system
Brain sections, human, 163
  Alzheimer's disease
  glial fibrillary acidic protein
  postmortem RNA
  recombinant cDNA library
Brain tissue, human
  acetylcholinesterase activity, 153
  adenylate cyclase activity, 153
  Alzheimer's disease, 153, 247, 333, 383
  amyloid peptide, 333
  beta amyloid peptide, 333
  blood-brain barrier dysfunction, 383
  choline acetyltransferase activity, 153
  congophilic angiopathy, 383
  DNA sequencing, 333
  dopamine neurons, 247
  guanylate cyclase activity, 153
  monoamine oxidase-B activity, 247
  muscarinic receptors, 153
  Parkinsonian pathology, 247
  precursor RNA, 333
  serum proteins, 383
  VIP-sensitivity, 153

Calcium, 743
  antioxidants
  growth factors
  neurotoxins
  tissue culture
Calcium conductance, 571
  hippocampal neurons
  memory
  synaptic potentiation
Calcium homeostasis, 263
  Alzheimer's disease
  fibroblasts
Catecholamines, 697
  memory deficits
  sympathetic nervous system
Catecholamine metabolism, 213
  dopamine levels
  norepinephrine levels
  stress, restraint
Cell cultures, 195
  Alzheimer's disease
  fibroblasts
  proliferative lifespan
Central nervous system, 31
  aging
  Alzheimer's disease
  blood-brain barrier
Cerebellum, 591
  in oculo grafts
  in situ grafts
  noradrenergic function
Cerebral blood flow, 619
  maze learning
Choline acetyltransferase activity
  acetylcholinesterase activity, 153
  adenylate cyclase activity, 153
  Alzheimer's disease, 153
  brain, mouse, 207
  brain tissue, human, 153
  guanylate cyclase activity, 153
  infection, persistent, 207
  lymphocytic choriomeningitis virus, 207
  muscarinic receptors, 153
  VIP-sensitivity, 153
Choline uptake, 363
  age-related deficit
  hippocampal function
  spatial learning
Cholinergic neurons
  aged neocortex, 199
  cognitive impairments, 645
  morphologic changes, 199
  neuritic plaques, 199
Cholinergic system, 475
  complex maze learning
  memory impairment
Cholinomimetics, 351
  Alzheimer's disease
  animal model
  memory impairment, age-related
  monkeys
Chronic treatment
  acute treatment, 287
  age differences, 287
  behavior deficits, 287
  dihydroergocryptine, 287
  disease reduction, 293
  ibopamine, 293
  lesions, neoplastic, 293
  lesions, nonneoplastic, 293
Circadian rhythms, 309
  suprachiasmatic nucleus
  vasoactive intestinal polypeptide
Classical conditioning
  age differences, 187
  eyelid response, 511
  human studies, 511
  mossy fiber stimulation, 187
  rabbits, 187, 511
Clonidine, 409
  Alzheimer's disease
  animal model
  memory impairment, age-related
  monkeys
Cognitive decline
  autoimmunity, 733
  avoidance learning, 733
  brain-reactive antibodies, 733
  electrophysiology, 563

spatial memory, 563
Cognitive functioning, 557
memory preservation
spatial memory
Cognitive impairments
acetylcholine, 617
automated memory tests, 617
cholinergic neurons, 645
memory dysfunction, 617
norepinephrine, 617
Complex maze learning, 475
cholinergic system
memory impairment
Congophilic angiopathy, 383
Alzheimer's disease
blood-brain barrier dysfunction
brain tissue, human
serum proteins
Corticosteroid receptors, 255
adrenocorticotropin$_{4-9}$
receptor plasticity
Corticotropin-releasing factor excess, 9
anorexia
human studies, elderly

Delayed nonmatching-to-sample, 495
monkeys
recognition memory
Dementia, 465
Alzheimer's disease
amnesia
memory impairment
Dementia of the Alzheimer type, 405
mitomycin-C
sister chromatid exchange
Depressive illness research, 101
aging
neuroendocrine function
Dihydroergocryptine, 287
acute treatment
age differences
behavioral deficits
chronic treatment
Disease reduction, 293
chronic treatment
ibopamine
lesions, neoplastic
lesions, nonneoplastic
DNA sequencing, 333
Alzheimer's disease
amyloid peptide
beta amyloid peptide
brain tissue, human
precursor RNA
Dopamine levels, 213
catecholamine metabolism
norepinephrine levels
stress, restraint
Dopamine neurons, 247
Alzheimer's disease
brain tissues, human
monoamine oxidase-B activity
Parkinsonian pathology
Drug
arecoline, 5
clonidine, 409
3,4-diaminopyridine, 263, 351
dihydroergocriptine, 371
dihydroergocristine, 371
dihydroergocryptine, 287
hemicholinium-3, 357
3-hydroxybenzyl-hydrazine, 213
ibopamine, 293
ketanserin, 377
mianserin, 377
norepinephrine, 173
papaverine, 371
physostigmine, 351, 667
scopolamine, 475, 667
serotonin, 173
tacrine, 5, 221
tetrahydroaminoacridine, 351
Drug effects, 667
brain lesions
forebrain ischemia
hippocampal cell loss
memory impairment
Drug interaction, 5
arecoline
memory retention
tacrine

Electrophysiology, 563
cognitive decline
spatial memory
Epinephrine, 709
glucose
memory dysfunction
neuroendocrine regulation
Ergot alkaloids, 371
age-related changes
brain redox index
glutathione system
Eyeblink response
associative learning deficits, 523
classical conditioning, 511
human studies, 511
Pavlovian conditioning, 523
rabbit studies, 511, 523
Experimental design, 469
memory impairments
parametric manipulation
within-subjects analysis

Fibroblasts
Alzheimer's disease, 195, 263
calcium homeostasis, 263
cell cultures, 195
proliferative lifespan, 195
Forebrain cholinergic system, 609
Alzheimer's type dementia
memory
Forebrain ischemia, 667
brain lesions
drug effects
hippocampal cell loss
memory impairment

Glial fibrillary acidic protein, 163
Alzheimer's disease
brain sections, human
postmortem RNA
recombinant cDNA library
Glucose, 709
epinephrine
memory dysfunction
neuroendocrine regulation
Glutathione system, 371
age-related changes
brain redox index
ergot alkaloids
Growth factors, 743
antioxidants
calcium
neurotoxins
tissue culture
Guanylate cyclase activity, 153
acetylcholinesterase activity
adenylate cyclase activity
Alzheimer's disease
brain tissue, human
choline acetyltransferase activity
muscarinic receptors
VIP-sensitivity

Heterogeneity, 69
Alzheimer disease diagnosis
brain imaging
symptom detection
Hippocampal cell loss, 667
brain lesions
drug effects
forebrain ischemia
memory impairment
Hippocampal dysfunction
learning, 487
memory, 487
memory impairment, 549
spatial learning deficits, 549
Hippocampal formation, 581
kindling
perforated synapses
spatial memory
Hippocampal function, 363
age-related deficit
choline uptake
spatial learning
Hippocampal neurons, 571
calcium conductance
memory
synaptic potentiation
Hippocampus
age differences, 393
age-related changes, 173
neuronal plasticity, 393
protein F1, 393
protein phosphorylation, 393
pyramidal neurons, 173
HLA-DR, 339
Alzheimer's disease
natural killer cells
neuroimmunology
T cytotoxic cells
T helper cells
Human data
classical conditioning, 535
memory disorders, 535
neuron numbers, 453
neuron sizes, 453
primate data, 453
rabbit data, 535
rodent data, 453
Human studies
Alzheimer's disease, 181, 399
classical conditioning, 511
eyelid response, 511
Huntington's disease, 181
multiple sclerosis, 399
olfactory function, 399
Parkinson's disease, 399
rabbit studies, 511
remote memory, 181
retrograde amnesia, 181
Human studies, elderly, 9
anorexia
corticotropin-releasing factor excess

Huntington's disease, 181
Alzheimer's disease
human studies
remote memory
retrograde amnesia

Ibopamine, 293
chronic treatment
disease reduction
lesions, neoplastic
lesions, nonneoplastic
Infection, persistent, 207
brain, mouse
choline acetyltransferase activity
lymphocytic choriomeningitis virus
In oculo grafts, 591
cerebellum
in situ grafts
noradrenergic function
In situ grafts, 591
cerebellum
in oculo grafts
noradrenergic function

Kindling, 581
hippocampal formation
perforant synapses
spatial memory

Learning
hippocampal dysfunction, 487
memory, 221, 487
memory disorders, 627
monkeys, 221
oral administration, 221
receptor antagonists, 627
serotonin system, 627
tacrine, 221
Lesions, neoplastic, 293
chronic treatment
disease reduction
ibopamine
lesions, nonneoplastic
Lesions, nonneoplastic, 293
chronic treatment
disease reduction
ibopamine
lesions, neoplastic
Lymphocytic choriomeningitis virus, 207
brain, mouse
choline acetyltransferase activity
infection, persistent

Maze learning, 691
cerebral blood flow
Memory
Alzheimer's type dementia, 609
calcium conductance, 571
forebrain cholinergic system, 609
hippocampal dysfunction, 487
hippocampal neurons, 571
learning, 221, 487
monkeys, 221
oral administration, 221
passive avoidance, 377
retention, 377
serotonergic antagonists, 377
synaptic potentiation, 571
tacrine, 221
Memory decline, 657
neurotransmitter receptors
senile plaques
Memory deficits, 697
catecholamines
sympathetic nervous system
Memory deterioration, 719
paradoxical sleep
sleep parameters
Memory disorders
classical conditioning, 535
human data, 535
learning, 627
rabbit data, 535
receptor antagonists, 627
serotonin system, 627
Memory dysfunction
acetylcholine, 617
Alzheimer's disease, 445
animal model development, 445
automated memory tests, 617
cognitive impairments, 617
epinephrine, 709
glucose, 709
neurodegeneration, 445
neuroendocrine regulation, 709
norepinephrine, 617
Memory impairment
Alzheimer's disease, 465
amnesia, 465
brain lesions, 667
cholinergic system, 475
complex maze learning, 475
dementia, 465
drug effects, 667
experimental design, 469
forebrain ischemia, 667
hippocampal cell loss, 667
hippocampal dysfunction, 549
parametric manipulation, 469
spatial learning deficits, 549
within-subject analysis, 469
Memory impairment, age-related
Alzheimer's disease, 351, 409
animal model, 351, 409
cholinomimetics, 351, 409
clonidine, 409
monkeys, 351, 409
Memory preservation, 557
cognitive functioning
spatial memory
Memory retention, 5
arecoline
drug interaction
tacrine
Method
autoradiography, 255, 305, 393
electrical microstimulation, 187
electrochemistry, 591
electron microscopy, 207
electrophysiology, 591
immunocytochemistry, 199, 309, 383
immunoperoxidase staining, 383
intracerebral microdialysis, 357
micro-ejection, 173
Northern analysis, 333
quantitative autoradiography, 269
Mitomycin-C, 405
dementia of the Alzheimer type
sister chromatid exchange
Monkeys
Alzheimer's disease, 351, 409
animal model, 351, 409
cholinomimetics, 351
clonidine, 409
delayed nonmatching-to-sample, 495
learning, 221
memory, 221
memory impairment, age-related, 351, 409
oral administration, 221
recognition memory, 495
tacrine, 221
Monoamine oxidase-B activity, 247
Alzheimer's disease
brain tissues, human
dopamine neurons
Parkinsonian pathology
Morphologic changes, 199
aged neocortex
cholinergic neurons
neuritic plaques
Mossy fiber stimulation, 187
age differences
classical conditioning
rabbits
Multiple sclerosis, 399
Alzheimer's disease
human studies
olfactory function
Parkinson's disease
Muscarinic receptors, 153
acetylcholinesterase activity
adenylate cyclase activity
Alzheimer's disease
brain tissue, human
choline acetyltransferase activity
guanylate cyclase activity
VIP-sensitivity

Natural killer cells, 339
Alzheimer's disease
HLA-DR
neuroimmunology
T cytotoxic cells
T helper cells
Neuritic plaques, 199
aged neocortex
cholinergic neurons
morphologic changes
Neurodegeneration, 445
Alzheimer's disease
animal model development
memory dysfunction
Neuroendocrine function, 101
aging
depressive illness research
Neuroendocrine regulation, 709
epinephrine
glucose
memory dysfunction
Neuroimmunology, 339
Alzheimer's disease
HLA-DR
natural killer cells
T cytotoxic cells
T helper cells
Neuromuscular junctions, 305
acetylcholine receptors
perijunctional distribution
Neuronal plasticity, 393
age differences
hippocampus
protein F1
protein phosphorylation
Neuron numbers, 453
human data

neuron sizes
primate data
rodent data
Neuron sizes, 453
human data
neuron numbers
primate data
rodent data
Neurotoxins, 743
antioxidants
calcium
growth factors
tissue culture
Neurotransmitter receptors, 657
memory decline
senile plaques
Noradrenergic function, 591
cerebellum
in oculo grafts
in situ grafts
Norepinephrine, 617
acetylcholine
automated memory tests
cognitive impairments
memory dysfunction
Norepinephrine levels, 213
catecholamine metabolism
dopamine levels
stress, restraint

Olfactory function, 399
Alzheimer's disease
human studies
multiple sclerosis
Parkinson's disease
Opiate receptors, 281
age differences
brain binding sites
Oral administration, 221
learning
memory
monkeys
tacrine

Paradoxical sleep, 719
memory deterioration
sleep parameters
Parametric manipulation, 469
experimental design
memory impairment
within-subjects analysis
Parkinsonian pathology, 247
Alzheimer's disease
brain tissues, human
dopamine neurons
monoamine oxidase-B activity
Parkinson's disease
Alzheimer's disease, 217, 399
human studies, 399
multiple sclerosis, 399
olfactory function, 399
phagocytic cell function, 217
Passive avoidance, 377
memory
retention
serotonergic antagonists
Pavlovian conditioning, 523
associative learning deficits
eyeblink response
rabbit studies
Peptide
adrenocorticotropin$_{4-9}$, 255
bradykinin, 263
corticotropin-releasing factor, 9
neuropeptide Y, 9
N-formyl-methionyl-leucyl-phenyl-alanine, 263
somatostatin, 275
substance P, 275
vasoactive intestinal polypeptide, 309
Perforant synapses, 581
hippocampal formation
kindling
spatial memory
Perijunctional distribution, 305
acetylcholine receptors
neuromuscular junctions
Phagocytic cell function, 217
Alzheimer's disease
Parkinson's disease
^{125}I-Pindolol binding, 269
β-adrenergic receptors
receptor density
Postmortem RNA, 163
Alzheimer's disease
brain sections, human
glial fibrillary acidic protein
recombinant cDNA library
Precursor RNA, 333
Alzheimer's disease
amyloid peptide
beta amyloid peptide
brain tissue, human
DNA sequencing
Primate data, 453
human data
neuron numbers
neuron sizes
rodent data
Proliferative lifespan, 195
Alzheimer's disease
cell cultures
fibroblasts
Protein F1, 393
age differences
hippocampus
neuronal plasticity
protein phosphorylation
Protein phosphorylation, 393
age differences
hippocampus
neuronal plasticity
protein F1
Pyramidal neurons, 173
age-related changes
hippocampus

Rabbit, 187
age differences
classical conditioning
mossy fiber stimulation
Rabbit data, 535
classical conditioning
human data
memory disorders
Rabbit studies
associative learning deficits, 523
classical conditioning, 511
eyeblink response, 523
eyelid response, 511
human studies, 511
Pavlovian conditioning, 523
Receptor antagonists, 627
learning
memory disorders
serotonin system
Receptor density, 269
β-adrenergic receptors
^{125}I-pindolol binding
Receptor plasticity, 255
adrenocorticotropin$_{4-9}$
corticosteroid receptors
Recognition memory, 495
delayed nonmatching-to-sample
monkeys
Recombinant cDNA library, 163
Alzheimer's disease
brain sections, human
glial fibrillary acidic protein
postmortem RNA
Remote memory, 181
Alzheimer's disease
human studies
Huntington's disease
retrograde amnesia
Retention, 377
memory
passive avoidance
serotonergic antagonists
Retrograde amnesia, 181
Alzheimer's disease
human studies
Huntington's disease
remote memory
Rodent data, 453
human data
neuron numbers
neuron sizes
primate data

Sciatic nerve, 275
age differences
somatostatin
substance P
vagus nerve
Senescence, 53
adrenergic receptors
age differences
brain neurotransmission
Senile plaques, 657
memory decline
neurotransmitter receptors
Serotonergic antagonists, 377
memory
passive avoidance
retention
Serotonin system, 627
learning
memory disorders
receptor antagonists
Serum proteins, 383
Alzheimer's disease
blood-brain barrier dysfunction
brain tissue, human
congophilic angiopathy
Sister chromatid exchange, 405
dementia of the Alzheimer type
mitomycin-C
Sleep parameters, 719
memory deterioration
paradoxical sleep
Somatostatin, 275
age differences
sciatic nerve
substance P
vagus nerve

Spatial learning, 363
  age-related deficits
  choline uptake
  hippocampal function
Spatial learning deficits, 549
  hippocampal dysfunction
  memory impairment
Spatial memory
  cognitive decline, 563
  cognitive functioning, 557
  electrophysiology, 563
  hippocampal formation, 581
  kindling, 581
  memory preservation, 557
  perforant synapses, 581
Stress, restraint, 213
  catecholamine metabolism
  dopamine levels
  norepinephrine levels
Substance P, 275
  age differences
  sciatic nerve
  somatostatin
  vagus nerve
Suprachiasmatic nucleus, 309
  circadian rhythms
  vasoactive intestinal polypeptide
Sympathetic nervous system, 697
  catecholamines
  memory deficits
Symptom detection, 69
  Alzheimer disease diagnosis
  brain imaging
  heterogeneity
Synaptic potentiation, 571
  calcium conductance
  hippocampal neurons
  memory

Tacrine
  arecoline, 5
  drug interaction, 5
  learning, 221
  memory, 221
  memory retention, 5
  monkeys, 221
  oral administration, 221
T cytotoxic cells, 339
  Alzheimer's disease
  HLA-DR
  natural killer cells
  neuroimmunology
  T helper cells
T helper cells, 339
  Alzheimer's disease
  HLA-DR
  natural killer cells
  neuroimmunology
  T cytotoxic cells
Tissue culture, 743
  antioxidants
  calcium
  growth factors
  neurotoxins

Vagus nerve, 275
  age differences
  sciatic nerve
  somatostatin
  substance P
Vasoactive intestinal polypeptide, 309
  circadian rhythms
  suprachiasmatic nucleus
VIP-sensitivity, 153
  acetylcholinesterase activity
  adenylate cyclase activity
  Alzheimer's disease
  brain tissue, human
  choline acetyltransferase activity
  guanylate cyclase activity
  muscarinic receptors

Within-subjects analysis, 469
  experimental design
  memory impairments
  parametric manipulation

AUTHOR INDEX

Abrass, I. B., 53
Albert, M. S., 507
Algeri, S., 213
Altman, H. J., 377, 627, 691
Anis, N. A., 303
Armstrong, D. M., 199, 645
Aston-Jones, G., 601
Azmitia, E. C., 743

Baker, A. C., 195
Balin, A. K., 195
Banks, W. A., 48
Barnes, C. A., 393, 563
Bartfai, T., 153
Bartus, R., 333, 351, 409, 443, 445, 743
Beal, M. F., 535
Beatty, W. W., 181, 557
Benson, D. F., 87
Benzi, G., 371
Berdes, C., 313
Berman, R. F., 691
Bertorelli, R., 357
Beyreuther, K., 43
Bickford-Wimer, P. C., 173, 591
Biesold, D., 421
Bigl, V., 421
Blass, J. P., 195
Bloom, F. E., 59
Blume, A. J., 333
Blundell, J. E., 18
Bombi, G. G., 413
Bongrand, P., 217
Braunstein, V., 207
Brodish, A., 273
Buchanan, S. L., 523
Butters, N., 181
Buzsaki, G., 645

Calderini, G., 213
Capo, C., 217
Chan, S. Y., 393
Chee, C. A., 307
Chen, K. S., 645
Cherkin, A., 5
Chou, W.-G., 163
Christen, Y., 427
Chui, H. C., 399
Civin, W. H., 339
Clissold, D. B., 617
Coleman, P. D., 453
Collier, T. J., 729
Colombo, P. M., 667
Consolo, S., 357
Conti, L. H., 617
Corain, B., 413
Cork, L. C., 657
Cotman, C. W., 399
Cutler, N. R., 90

D'Agata, V., 285
Danielsson, E., 153
Davies, D. C., 46
Davies, P., 207
Deadwyler, S. A., 606
Dean, R. L., III, 127, 351, 409
de Kloet, E. R., 253
De Leon, M. J., 88
deToledo-Morrell, L., 581
Donnelly, R., 333
Drago, F., 285
Dunlap, W. P., 667
Duong, T., 41

Eckernäs, S.-Å., 153
Eikelenboom, P., 383
Eldridge, J. C., 273
Evans, P. H., 225

Fairburn, C. G., 28
Fang, H., 399
Finkel, S. I., 313
Fitten, L. J., 221
Flood, D. G., 453
Flood, J. F., 5
Forster, M. J., 733
Freedman, R., 173
Friedland, R. P., 95
Fu, T.-K., 405

Gage, F. H., 199, 645
Gallagher, M., 363, 549
Gash, D. M., 685
Gastaut, J. L., 217
Geinisman, Y., 581
George, A. E., 88
Gerhardt, G. A., 591
Giannini, A. J., 26
Gold, P. E., 709, 719
Goldman, H., 691
Goldman, J. E., 261
Gordon, M. N., 763
Gottfries, C.-G., 153
Goudsmit, E., 307
Granholm, A.-C., 591
Granholm, E. L., 181

Halonen, T., 245
Hardy, J. A., 46
Harik, S. I., 50
Hefti, F., 689
Heindel, W. C., 181
Hersh, L. B., 199
Ho, I. K., 279
Hole, K., 231
Hope, R. A., 28
Horwitz, B., 95
Hoskins, B., 279

Ingram, D. K., 443, 475
Insel, P. A., 64

Janak, P. H., 697
Jarvik, L. F., 119

Kamphorst, W., 383
Kastin, A. J., 48
Kaszniak, A. W., 92
Kesner, R. P., 609
Kesslak, J. P., 399
Khachaturian, Z. S., 443
Kimble, D. P., 317
Kitt, C. A., 657
Kling, A., 221
Knusel, B., 689
Kordower, J. H., 127, 685

Kosma, V.-M., 245
Koss, E., 95
Kress, Y., 207

Laakso, M., 245
Lal, H., 733
Landfield, P. W., 571
Lauria, N., 285
Leibowitz, S. F., 20
Leong, I. C., 195
Linden, D. J., 393
Lister, R. G., 505
Liu, D. D., 279
Lomuscio, G., 213
Lovinger, D. M., 393
Luber-Narod, J., 339
Lynch, G., 399

Maclean, D. B., 273
Majocha, R. E., 163
Maletta, G. J., 122
Malminen, O., 245
Marciano, F. F., 127
Marcus, D., 88
Markowska, A., 469
Marotta, C. A., 163
Martinez, J. L., Jr., 697
Marzatico, F., 371
Masters, C. L., 43
Matsuyama, S. S., 405
Mege, J. L., 217
Metter, E. J., 69
Michel, B., 217
Miller, J. A., 173, 267
Miller, J. D., 88
Miner, G. D., 415
Mirmiran, M., 307
Mizumori, S. J. Y., 393
Mohs, R. C., 465
Mooradian, A. D., 31
Morgan, D. G., 763
Morley, J. E., 9
Morrell, F., 581
Moss, M. B., 495
Murakami, K., 393

Nelson, R. B., 393
Nemeroff, C. B., 120
Nordström, Ö., 153
Normile, H. J., 377, 627

Oldendorf, W., 52
Olton, D. S., 443, 469, 569
Ordy, J. M., 667

Paljärvi, L., 245
Pardridge, W. M., 44
Pastoris, O., 371
Pelleymounter, M. A., 363, 549
Pendlebury, W. W., 535
Pepeu, G., 357
Perryman, K., 221
Peters, A., 495
Peterson, C., 261
Pfeffer, R., 399
Pontecorvo, M. J., 617
Ponzio, F., 213
Pouplard-Barthelaix, A., 427
Powell, D. A., 523
Price, D. L., 657

Rapp, P. R., 503
Raskind, M. A., 101
Rasool, C. G., 333
Ratan, R. R., 261
Rehman, S., 163
Reinikainen, K. J., 245
Reul, J. M. H. M., 253
Richter, R. W., 415
Riege, W. H., 69
Riekkinen, P. J., 245
Robbins, N., 303
Roberts, E., 97
Rocchetti, M., 213
Rogers, J., 339, 601, 759
Roozendaal, B., 307
Rose, G. M., 173
Rosene, D. L., 495
Roth, G. S., 63
Routtenberg, A., 393
Rovigatti, U., 759
Rozemuller, J. M., 383

Sacchetti, G., 213
Sacconi, M., 357
Sajdel-Sulkowska, E. M., 163
Salim, M., 163
Salmon, D. P., 181
Sara, S. J., 730
Scapagnini, U., 285
Scarpace, P. J., 53
Scheibel, A. B., 41
Schiffman, S. S., 24
Schulteis, G., 697
Severson, J. A., 67
Shelanski, M. L., 261
Sheu, F.-S., 393
Shock, N. W., 17
Silver, A. J., 9
Solomon, P. R., 535
Somjen, G. G., 227
Srebro, B., 231
Stam, F. C., 383
Steinmetz, J. E., 187
Stone, W. S., 709, 719
Struble, R. G., 657
Styren, S. D., 339
Sunderland, T., 125, 505
Swaab, D. F., 307

Tachiki, K., 221
Thomas, G. J., 667
Thompson, R. F., 187, 547
Toffano, G., 213
Tonnaer, J. A. D. M., 253

Ueno, E., 279

Valerio, C., 285
van den Noort, S., 399
Veith, R. C., 101
Villa, R. F., 371
Visser, S. L., 139
Vitek, M., 333
Vitek, S., 333
Volpe, B. T., 667

Wagster, M. V., 657
Walker, L. C., 657
Walker, R. F., 291
Wallin, A., 153
Warwick, Z. S., 24
Weideman, C. A., 291
Weinberger, S. B., 697
Weingartner, H. J., 505
Weiss, B., 61
Wenk, G. L., 640
Westlind-Danielsson, A., 153
Wheeldon, E. B., 291
Whitaker-Azmitia, P. M., 743
White, H. C., 127
Whitehouse, J. P., 639
Winocur, G., 487
Woodruff-Pak, D. S., 187, 511
Wu, C. F., 357
Wurtman, J. J., 22

Zahniser, N. R., 267
Zain, S. B., 163
Zisman, B. R., 207
Zornetzer, S. F., 642